DETERMINATION OF PHENOLIC COMPOUNDS IN AQUEOUS EXTRACT OF CASSAVA SHOOTS AND BANANA HEARTS USING TOTAL PHENOLIC CONTENT (TPC) METHOD

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ABSTRACT

"ulam" is a group of vegetables that is consumed fresh as salad or slightly blanched or steam which have medicinal properties, lowering the incidence of cancer, and control ageing. Cassava shoots and banana hearts are examples of "ulam" that need to be blanched first before they can be consumed. This project was carried out to determine the total phenolic content in each blanched cassava shoots and banana hearts. Gallic acid was used as the standards thus the total phenolic content was expressed as mg GAE/g fresh sample. The selected blanching time for cassava shoots were 10, 15, and 20 minutes and the total phenolic content were 0.690 ± 0.005 mg GAE/g fresh sample, 0.598 ± 0.019 mg GAE/g fresh sample, and 0.576 ± 0.010 mg GAE/g fresh sample respectively. As for banana hearts, the selected blanching time were 20, 30, and 40 minutes and the total phenolic content were 0.499 ± 0.016 mg GAE/g fresh sample, 0.422 ± 0.014 mg GAE/g fresh sample, and 0.345 ± 0.010 mg GAE/g fresh sample respectively. By comparing total phenolic in both samples, it was founded that blanched cassava shoots contained more phenolic content. Since antioxidants were phenolic compounds and total phenolic content was determined in each sample, the optimal blanching time for optimal antioxidants get consumed can be estimated. Thus, optimal blanching time for cassava shoots and banana hearts was found to be 10 minutes and 20 minutes respectively.